

**CLAIMS**

1. A method for determining a reference value of a response contained in a reception signal of a secondary radar, the response comprising pulses arranged according to a determined protocol, method in which:
- the position of the pulses present is tagged (IMP) in the reception signal (SRC);
  - 5 - potential positions of pulses of the response considered are determined (FLT);
  - time windows are selected, each time window tagging in the reception signal a stable part (STB) of a pulse whose position has been tagged and whose tagged position coincides with a determined potential position, the reference value being the value taken predominantly by samples of the reception signal, these samples being situated in the
  - 10 selected time windows.
2. The method as claimed in claim 1 in which in the presence of nesting between several responses, when the time windows are selected to determine the reference value, the selection is limited to the time windows situated in a non-nested part of the response
- 15 considered.
3. The method as claimed in claim 1 in which the position of the pulses present are tagged by detecting rising and/or falling edges in the reception signal.
- 20 4. The method as claimed in claim 3 in which the isolated pulses having a determined width, if the reception signal comprises a pulse seeming to have a duration greater than the determined width, not only the position of this pulse is tagged, but also the position of a masked pulse, the position of the masked pulse being deduced from the rising edge or from the falling edge of the long pulse to which is added or from which is deducted the determined
- 25 width.
5. The method as claimed in claim 3 in which in the presence of nesting between several pulses, the position of the first pulse is tagged on the basis of a rising edge and the position of the last pulse is tagged on the basis of a falling edge.
- 30 6. The method as claimed in claim 1 in which the coincidence between the position of the pulses present in the reception signal on the one hand, and the position of potential data pulses on the other hand, is tested using a tolerance dependent on the accuracy of the tagging of the position of the pulses present in the reception signal.

7. A method for detecting pulses of a response in which:
- a reference value is determined according to any one of the preceding claims,
  - the average value of the samples situated in a selected time window is determined;
- 5 - a pulse is detected each time that the average value determined belongs to a certain span of values centered around the reference value determined.
8. A device for determining a reference value of a response contained in a reception signal of a secondary radar, the response comprising pulses arranged according to a determined
- 10 protocol, device comprising at least:
- means for tagging (IMP) in the reception signal (SRC) the position of the pulses present;
  - means for determining (FLT) the potential positions of pulses of the response considered;
  - means for selecting time windows, each time window tagging in the reception signal a
- 15 stable part (STB) of a pulse whose position has been tagged and whose tagged position coincides with a determined potential position, the reference value being the value taken predominantly by samples of the reception signal, these samples being situated in the selected time windows.